# “So many lasers, so little time.”
# Automating Your Laser Safety Program


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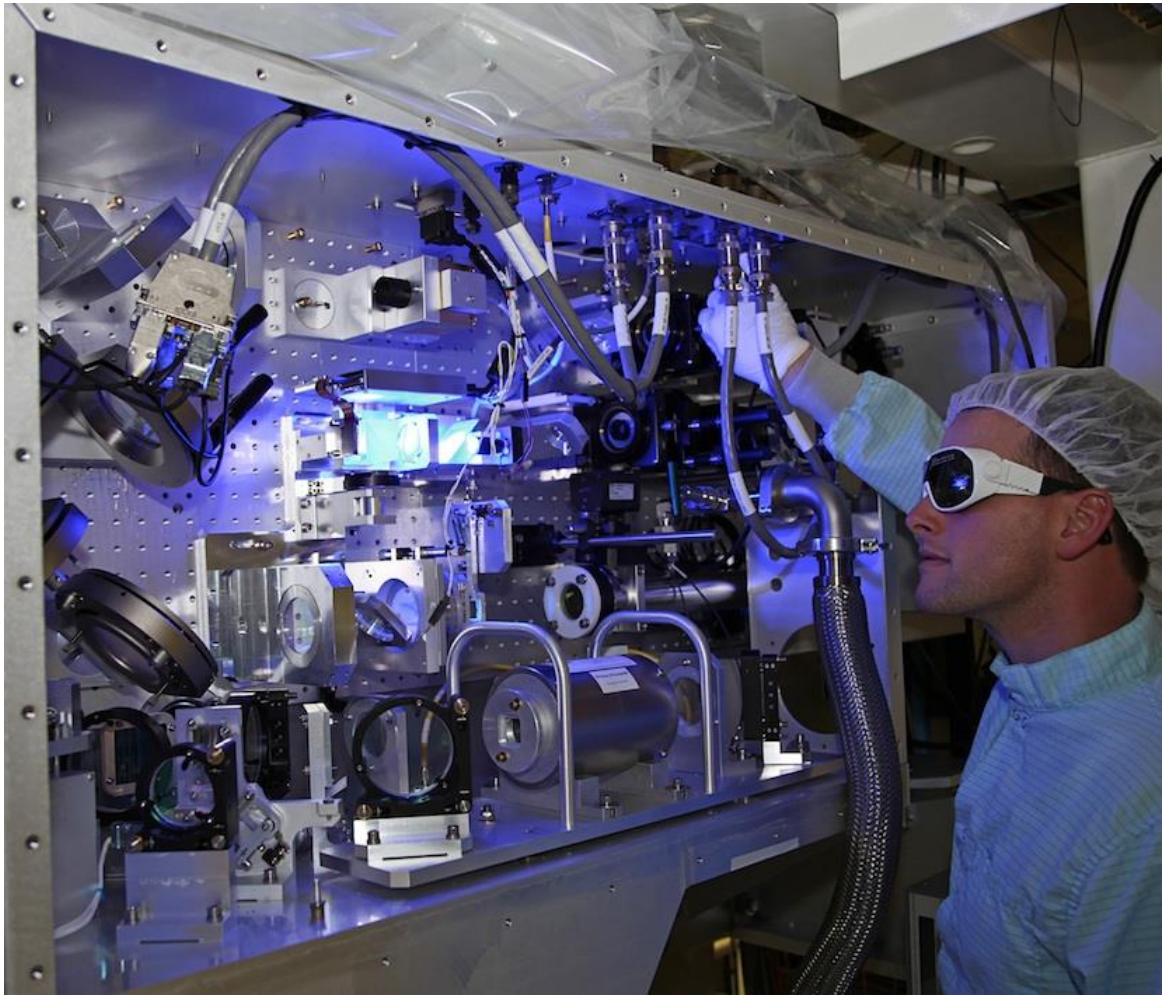
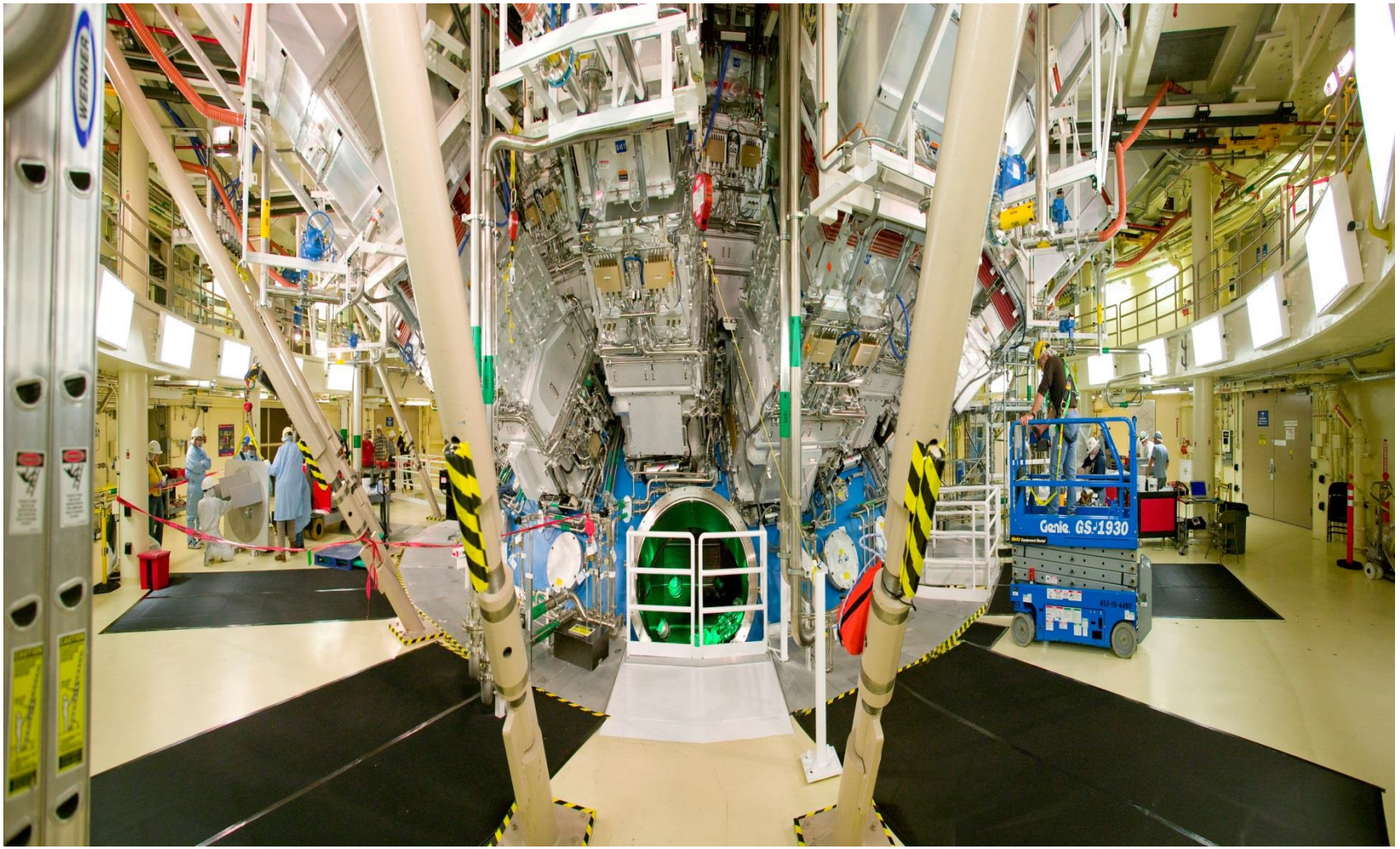
# Background

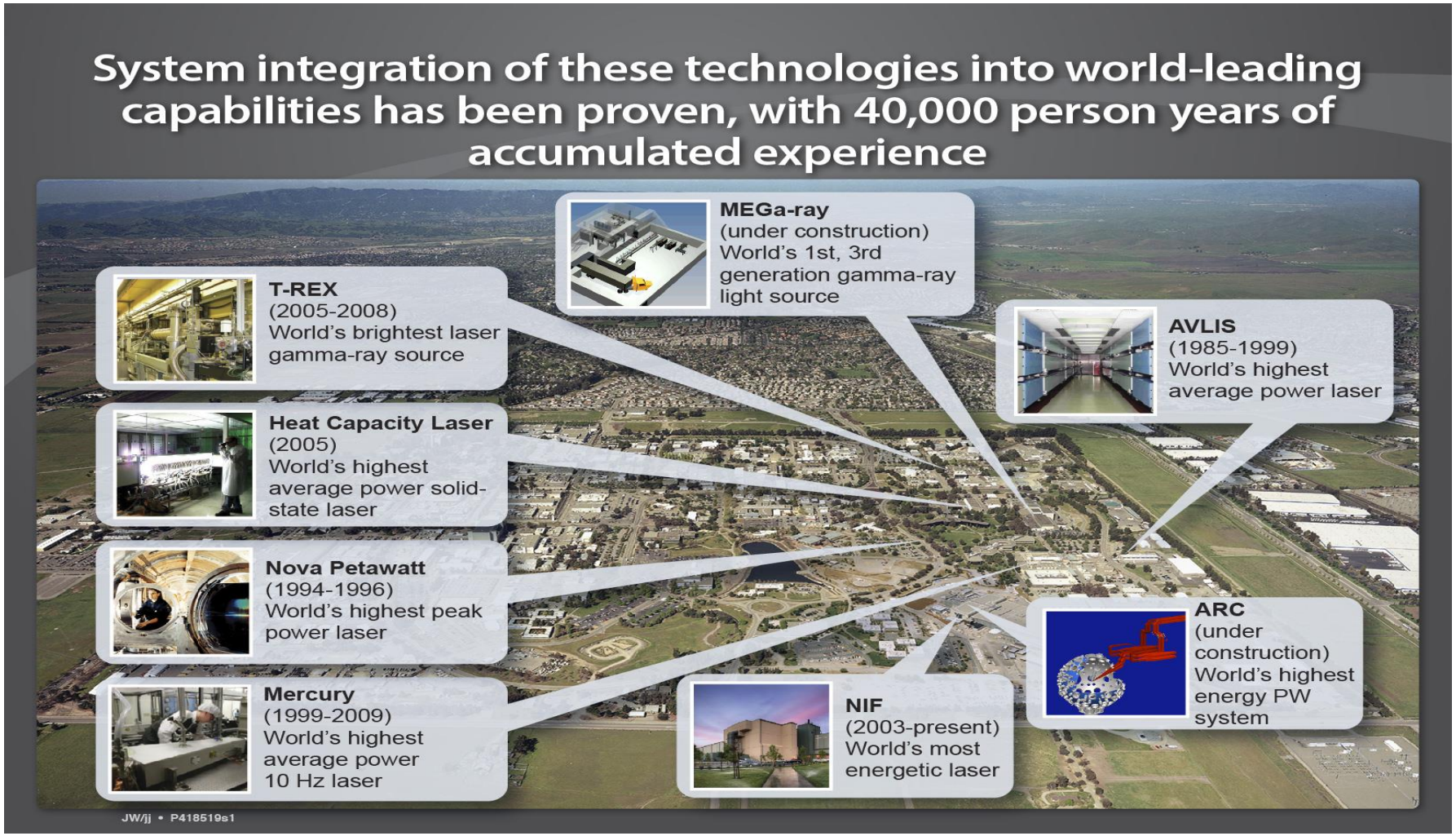
# Everything From Small Scale



# To Large Scale Laser Labs



# Lasers, Lasers, and More Lasers

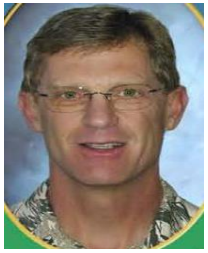


# Personnel

LLNL Laser Safety Officer – Jamie King

Deputy Laser Safety Officers



Average of 21 Laser Labs per LSO

# The Program

| | | |
|---|---|---|
| Work Authorization Documentation | Controlled Items/Services List | EZHaz® Laser Assessments |
| Laser Inventory | Annual Audits | Issues Tracking System |

# Room for Improvement

## What Worked

- Programs fulfilled regulatory requirements as well as LLNL program requirements.
- Effective managing annual laser audits.

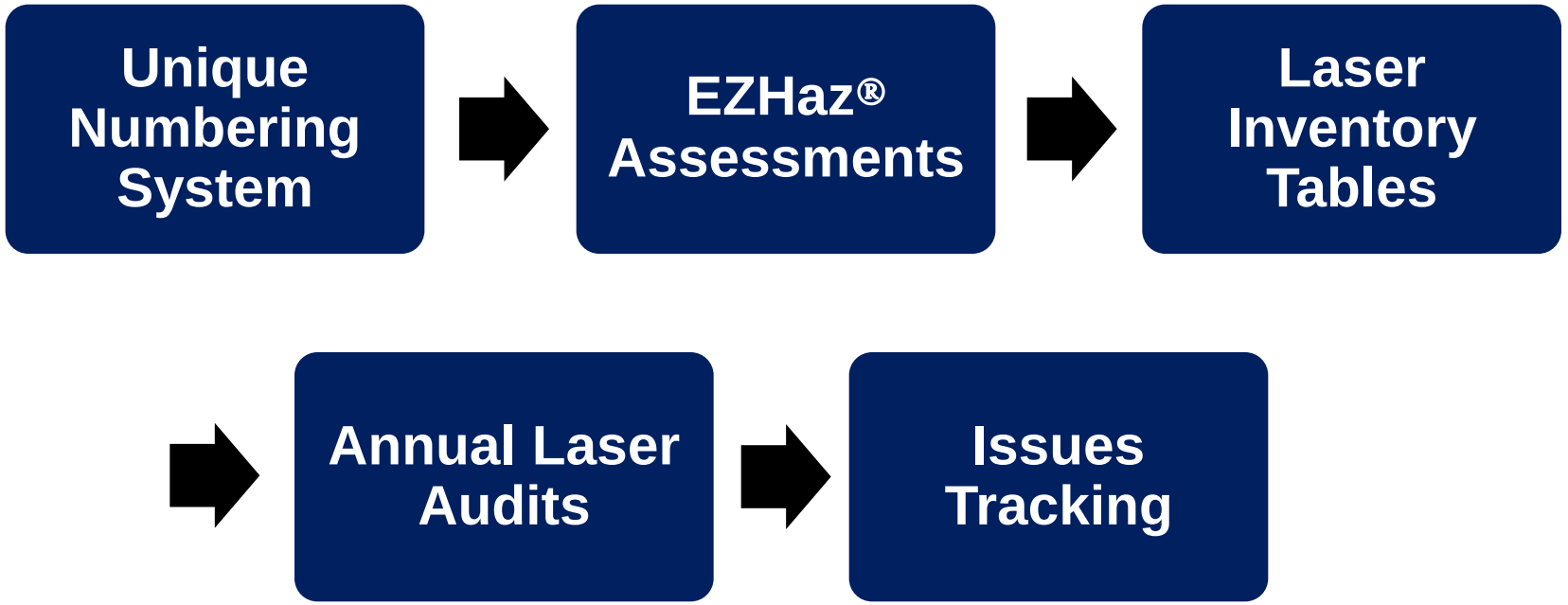
## What Didn't

- Not effective managing laser database or overall program management.
- Very time and labor intensive.

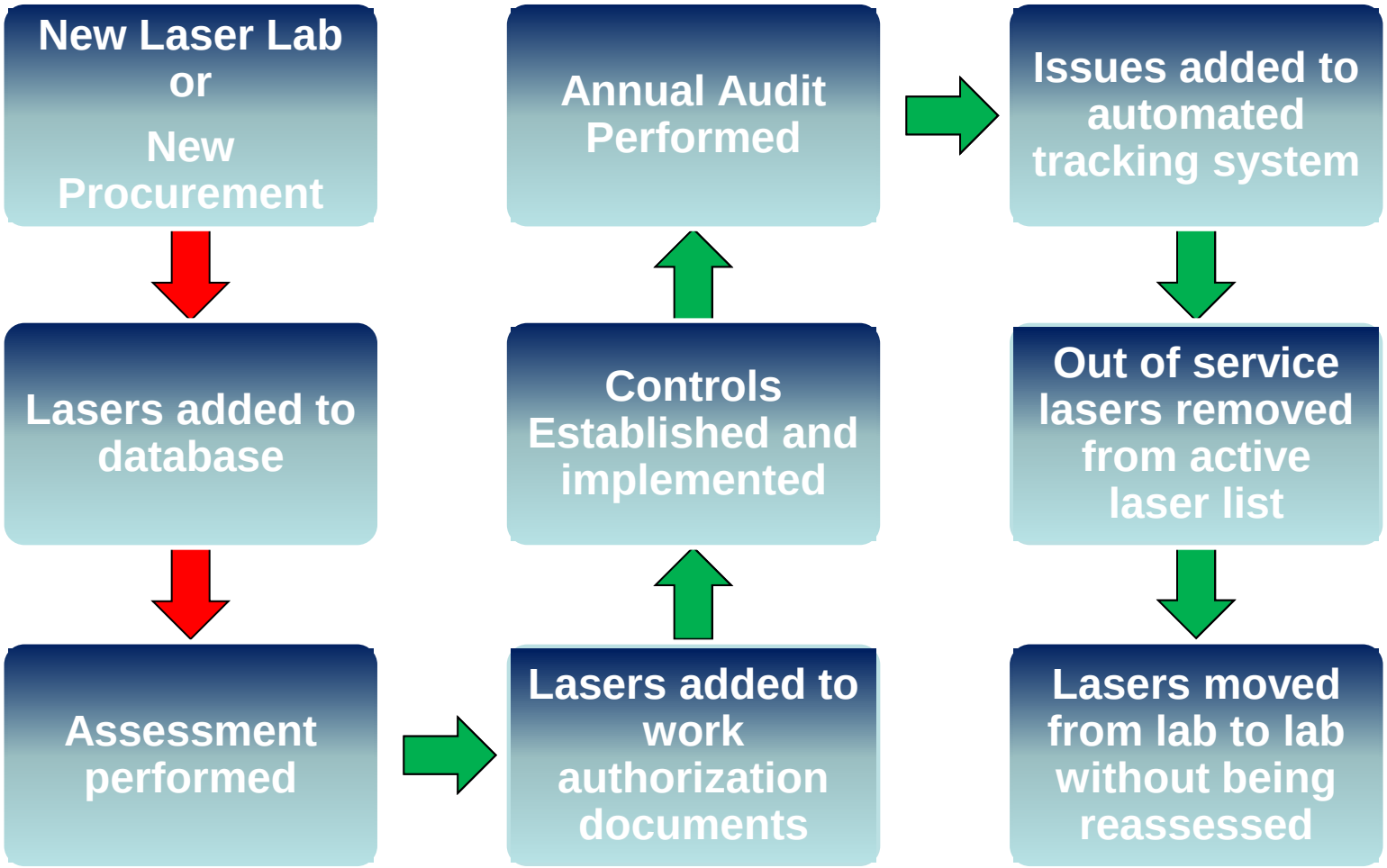
# Why fix it?

- Control banding work authorization process
- Issues tracking and reporting
- Time and labor burden
- Advancement in wireless technology and security

# The development process



# Process Flow



# The result

- LSO time burden is reduced significantly.
- Interruption to the program minimized.
- Assessments documented through the database.
- Laser database is searchable and intuitive.
- Virtually every aspect of program is automated.
- Data collection/assessments performed in real time.
- Automation reduces the chances of human error.
- Automatic issue and audit tracking.
- All notifications are automated.
- An overall easier managed laser safety system.

# Questions?